

Emotional dissonance, emotional exhaustion and job satisfaction in call centre workers

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The rapid rise of the service sector, and in particular the call centre industry has made the study of emotional labour increasingly important within the area of occupational stress research. Given high levels of turnover and absenteeism in the industry this article examines the emotional demands (emotional labour) of call centre work and their relationship to the job satisfaction and emotional exhaustion in a sample of South Australian call centre workers ($N = 98$) within the theoretical frameworks of the job demand–control model, the effort–reward imbalance model, and the job demands–resources model. Qualitatively the research confirmed the central role of emotional labour variables in the experience of emotional exhaustion and satisfaction at work. Specifically the research confirmed the pre-eminence of emotional dissonance compared to a range of emotional demand variables in its potency to account for variance in emotional exhaustion and job satisfaction. Specifically, emotional dissonance mediated the effect of emotional labour (positive emotions) on emotional exhaustion. Furthermore emotional dissonance was found to be equal in its capacity to explain variance in the outcomes compared to the most frequently researched demand measure in the work stress literature (psychosocial demands). Finally, emotional dissonance was found to exacerbate the level of emotional exhaustion at high levels of psychosocial demands, indicating jobs combining high levels of both kinds of demands are much more risky. Future theorizing about work stress needs to account for emotional demands, dissonance in particular. Potential ways to alleviate emotional exhaustion due to emotional dissonance is to reduce other psychosocial demands, increase rewards, support and control as conceptualized in the JDR model. Ways to boost job satisfaction are to increase control, support, and rewards.

The last two decades of the twentieth century witnessed a major global shift in the distribution of employment away from agriculture and industry into

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the service sector (Godbout, 1993). Concomitant with this transition has been the creation of a relatively new labour market characterized by work roles that emphasize interactions between front-line service workers and customers. As a consequence a new type of work demand, that of emotional labour, has emerged as a key component of interactive service work.

One such example of work requiring emotional labour is that of call centre work. This work requires constant interaction with customers, and the requirement to regulate emotions at work. It is not unusual to experience constant abuse from angry customers, and in these situations the call centre worker (CCW) must maintain organizational standards with respect to customer service—adherence to the organizational value that the customer is always right. Paradoxically, while the unique role of the call centre is the creation and maintenance of good customer relationships, call centres themselves have evolved in response to significant technological advances as well as global demands for cost-cutting initiatives. The CCW is therefore faced with the opposing goals of optimizing productivity while delivering superior customer service.

Even in call centres driven by quality rather than quantity, call centre work is of itself demanding, repetitive, and often stressful (Taylor & Bain, 1999; Wallace, Eagleson, & Waldersee, 2000). This is reflected in high levels of turnover and absenteeism. Staff turnover in the Australian call centre industry is estimated to be 18% per year, representing a cost of Australian \$330m annually (Information Industries Training Advisory Board, 2001). In call centres characterized by high stress, turnover is reported to be almost double the industry average. Stress-related absenteeism is estimated to cost the industry \$A 7.5m per year (ACTU Call Centre Unions Group, 2001).

Call centres are growing at an astonishing 40% per year globally. In Australia, call centre growth is forecast at around 20–25% annually (ACTU Call Centre Unions Group, 2001). Given the rapid growth of the call centre industry it is important from a practical perspective that organizations are aware of the impact of the emotional and psychological demands of call centre work on their employees in order to optimize the effectiveness and well-being of front-line workers and decrease the costs of turnover and absenteeism. From a theoretical perspective it is important that emotional labour is acknowledged in existing theories of occupational stress in order to assess its interaction with, and impact on, other workplace influences such as job and organizational characteristics (Abraham, 1998).

The aims of this article are twofold. The first aim is to develop a more detailed understanding of the emotional demands associated with call centre work and to assess the relationship between these emotional demands and CCW well-being. To achieve this aim the different components of emotional labour and their relationship to emotional exhaustion and job satisfaction among CCWs will be explored. The second aim is to assess the salience of

emotional dissonance in the prediction of CCW well-being and, further, to identify resources that may moderate the impact of emotional dissonance on call centre worker well-being. It is proposed to achieve these aims by (1) assessing the contribution of emotional dissonance to CCW emotional well-being and job satisfaction, (2) examining the relationship between emotional dissonance, organizational stressors, and resources and their combined effects on CCW emotional well-being and job satisfaction, and (3) placing the analysis of emotional dissonance within the context of a variety of theoretical viewpoints in order to arrive at a model that best predicts emotional well-being and job satisfaction among CCWs. In order to explicate these aims we will first discuss the concept of emotional labour and outline recent attempts to operationalize it. The relationship between emotional labour, other organizational work characteristics and employee well-being will then be reviewed. Finally three theoretical frameworks selected for the analysis of emotional labour will be presented and discussed.

EMOTIONAL LABOUR

The concept of emotional labour was first used by sociologist Arlie Hochschild (1983) to analyse the jobs of flight attendants and bill collectors and has been defined as “the effort, planning, and control needed to express organizationally desired emotions during interpersonal transactions” (Morris & Feldman, 1996, p. 98). According to Ashforth and Humphrey (1993, p. 96), “emotional labour is a double-edged sword”. In its functional capacity, emotional labour can serve to facilitate task effectiveness by providing the service worker with a means to regulate what are often dynamic and emergent interactions and thus provide the worker with a sense of increased self-efficacy. Emotional labour makes interactions with customers more predictable, and allows the service worker to maintain objectivity and emotional equilibrium by cognitively distancing him/herself from the implicated emotion. Emotional labour may also facilitate self-expression by enabling the service worker to “project at least some of the ‘authentic self’ into the enactment” (Ashforth & Humphrey, 1993, p. 94).

On the other hand, emotional labour can become dysfunctional for the worker when dissonance between felt emotions and displayed emotions is experienced. This incongruence between feeling and action, termed *emotional dissonance*, may ultimately lead to lowered self-esteem, depression, cynicism, and alienation from work. Similarly, self-alienation may result when the worker ceases to recognize or even feel authentic emotions (Ashforth & Humphrey, 1993).

There is a wide discrepancy in the literature exploring the relationship between emotional labour and employee well-being. Adelman (1995) for example found no relationship between emotional labour and job outcomes

in a study of table servers, whereas Wharton (1993) found that emotional labour actually enhanced job satisfaction. The relationship between emotional labour and job outcomes appears to be further complicated by the interaction of emotional labour with other work conditions such as job autonomy, job involvement, self-monitoring, and organizational identification (Adelmann, 1995; Schaubroeck & Jones, 2000; Wharton, 1993). In contrast Pugliesi (1999) found an independent effect of job conditions and emotional labour on job strain, job satisfaction, and psychological distress.

Morris and Feldman (1996, 1997) posit that one reason for the discrepancies noted in the literature is the incomplete operationalization of the emotional labour construct. They have proposed a more rigorous conceptualization of emotional labour that considers both its qualitative (emotional dissonance) and quantitative (frequency and duration of emotional display) components and predict three outcomes of emotional labour based on these components. First, emotional exhaustion is predicted via emotional dissonance, based on the argument that emotional dissonance is a type of role conflict and role conflict has been shown to be a key antecedent of emotional exhaustion. Second, job dissatisfaction due to emotional dissonance is predicted through person–environment fit theory, which suggests that not all workers would find the requirement to express organizationally desired emotions dissatisfying. Thus frequency and duration of emotional labour (quantitative components) may not be relevant to job dissatisfaction. Rather it is the workers who experience *dissonance* (qualitative component) who will experience decreased levels of job satisfaction. A third outcome, role internalization, encompasses the argument put forward by Ashforth and Humphrey (1993) that work roles requiring emotional labour also carry pressure to internalize role demands because failure to internalize organizational display rules will ultimately lead to poor perceived job performance and job loss. However, overidentification with the work role so that too much emotional labour is expended in meeting high work demands can increase the risk of emotional exhaustion (Schaufeli & Enzmann, 1998).

Expanding on the propositions of Morris and Feldman (1996, 1997), Zapf, Vogt, Seifert, Mertini, and Isic (1999) have recently developed a quantitative measure of emotional labour. The Frankfurt Emotion Work Scale (FEWS) differentiates five factors of emotional labour, namely the requirement to display positive emotions, the requirement to display negative emotions, the necessity to display sensitivity to the needs of the client (sensitivity requirements), the ability of an employee to decide when to engage in an interaction with a client and when that interaction will end (interaction control), and emotional dissonance. Following from Morris and Feldman's (1996, 1997) proposition that frequency and duration of emotional labour need not directly impact on employee well-being, but

may do so through emotional dissonance, Zapf et al. (1999) propose that the requirement to display positive emotions, negative emotions, and sensitivity requirements are not necessarily stressful but may become so through emotional dissonance.

In a test of the FEWS scale on employees from social service institutions, the hospitality industry, and call centres, emotional dissonance was highly correlated with emotional exhaustion, depersonalization, irritation, and psychosomatic complaints. Emotional dissonance was negatively associated with job satisfaction in all but the hospitality industry sample (Zapf et al., 1999). In a further study using the FEWS to investigate the relationship between organizational stressors, social stressors, emotional labour, and burnout, emotional dissonance was identified as the most stressful aspect of emotional labour. Further, the contribution of emotional dissonance to emotional exhaustion and depersonalization was similar to that of task and organizational stressors (Zapf, Seifert, Schmutte, Mertini, & Holz, 2001). Based on the concepts discussed above we hypothesized that of all the emotional labour factors emotional dissonance would account for the most variance in emotional exhaustion and job dissatisfaction (Hypothesis 1).

EMOTIONAL LABOUR AND ORGANIZATIONAL STRESSORS AND RESOURCES

Recent attempts to clarify the relationship between emotional labour and other organizational variables in the prediction of employee well-being have consistently reported that job related stressors, especially work overload, time pressures, and role conflicts, are more strongly associated with emotional exhaustion than client-related stressors such as interactions with difficult clients (Lee & Ashforth, 1996; Schaufeli & Enzmann, 1998). However, Zapf et al. (2001) observe very few of these studies have directly measured emotional demands. Further Schaufeli and Enzmann argue that the high correlations reported between workload and emotional exhaustion may result from the conceptual overlap between task-related and client-related job characteristics. For example, call centre workers who are expected to provide a service to the customer (client related) and at the same time answer as many calls as possible (workload) may experience time pressure and/or role conflict.

Based on the dual level exchange theory of burnout, Zapf et al. (2001) posit that one can expect to find interactions between organizational stressors and emotional demands in the development of emotional exhaustion due to the combined effect of lack of perceived client reciprocity when emotional demands are high, and lack of perceived organizational reciprocity when organizational stressors are high. However, a unique contribution of emotional demands to emotional exhaustion can also be expected, as

emotional dissonance by its definition may act as a stressor independent of other organizational stressors. In Zapf et al.'s (2001) comparison of the relationship between emotional labour variables, organizational variables, and social variables in the prediction of burnout across a range of service jobs including call centre work, a unique contribution of emotional labour variables to burnout was noted over and above the contribution of other variables. Interaction effects between task-related stressors and emotional dissonance were also noted in the prediction of emotional exhaustion.

Job resources are also relevant in the prediction of employee well-being. As found in the broader work stress literature researching psychosocial demands and employee well-being, job resources such as social support and autonomy also appear to moderate the relationship between emotional demands and employee well-being (see Zapf, 2002).

Guided by the concepts discussed above we hypothesized that emotional dissonance would explain a unique proportion of the variance in emotional exhaustion and job satisfaction beyond that accounted for by psychosocial demands (Hypothesis 2).

To further conceptualize how the various work demands and resources may combine together we searched the literature for a theoretical framework in which to place an analysis of emotional dissonance and its relationship to employee well-being. As de Jonge and Dormann (2003) observe, although a variety of theoretical frameworks are available for the analysis of workplace stressors, it is difficult to decide what framework is relevant to a particular work setting, a decision that is complicated further by the general lack of consensus on the value of the contribution made by existing theories to the understanding of work stress. In response to this predicament, three current models of work stress: the job demand–control model (JDC; Karasek, 1979); the effort–reward imbalance model (ERI; Siegrist, 1998); and the job demands–resources model (JDR; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) were examined.

The JDC and ERI models of work stress were selected for analysis of call centre work because they are predominant theories that have been critically examined in the literature and empirically supported. The JDC and the ERI model both predict that stress arises as a consequence of an imbalance between the worker and the work environment. However, while the JDC model identifies the environmental constraint, decision latitude, as the central modifier of the impact of workplace demands on strain (Baker, 1985), the ERI identifies occupational reward as the key modifier. Further, where the JDC model focuses attention on work content, the ERI makes a distinction between situational and personal characteristics. Specifically the ERI model identifies individuals who engage in a pattern of active coping with work demands, characterized by excessive effort and a higher than average need for approval and esteem (overcommitment), as more

susceptible to the adverse effects of effort–reward imbalance in the long run (Joksimovic, Siegrist, Peter, Meyer-Hammar, Klimek, & Heintzen, 1999).

The JDC model and the ERI model have been criticized on the grounds that the measurement of psychological demands employed by the models may not be applicable across occupational groups (de Jonge & Dormann, 2003; Kasl, 1996). It is claimed that the indices commonly used to measure global job demands are operationalized in terms of physical effort and time pressures, to the exclusion of other potential sources of strain (Melamed, Kushnir, & Meir, 1991; Van Der Doef & Maes, 1999). This study will partially address this criticism by assessing demands specific to service work (emotional demands).

De Jonge, Mulder, and Nijhuis (1999) assessed the impact of emotional, physical, and psychosocial demands on the well-being of health care workers within the framework of the JDC model, and found that only psychological demands had a significant direct effect on emotional exhaustion. No direct or indirect effect of emotional demands on emotional exhaustion was evident. Using the ERI model as a theoretical framework, Van Vegchel, de Jonge, Meijer, and Hamers (2001) also failed to find an association between emotional demands and risk of emotional exhaustion among ancillary health care workers. The operationalization of the emotional labour construct may account for the failure to find an association between emotional demands and psychological well-being in these studies.

A more recent theoretical model of work stress, the job demands–resources model (Demerouti et al., 2001) was further included for comparison in this study. The JDR model was chosen as it conceptually resembles a combined JDC/ERI model. Calnan, Wainwright, and Almond (2000) have reported that a combined JDC/ERI model improved the prediction of stress in general practitioners. The JDR model proposes that employee well-being is related to a wide range of workplace variables that can be conceptualized as either job demands (the physical, social, or organizational aspects of the job that require sustained physical or psychological effort) or job resources (those aspects of work that may reduce job demands, aid in achieving work goals, or stimulate personal growth, learning, and development) (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003; Demerouti et al., 2001). The JDR model predicts that burnout occurs through exposure to job demands (via emotional exhaustion) and lack of resources (via cynicism and a reduced sense of personal accomplishment), and that an interaction between job demands and job resources is the most important for the development of burnout. A recent test of the model across four different home care organizations found a significant interactive effect of job demands and resources in the prediction of exhaustion in two of the organizations over and above the main effects for these two variables (Bakker et al., 2003).

Thus using the concepts of the JDC and ERI models, the JDR model predicts that employees experiencing high job demands, and low levels of resources (control, support, rewards) are the most likely to experience the highest levels of work stress.

In summary, while there is evidence to support the distinctive contribution of both the JDC and the ERI in the prediction of work stress, there is also evidence to suggest that both models combined may enhance the overall explanatory power. It is therefore hypothesized that the JDR model will account for more variance than either the JDC or ERI alone (Hypothesis 3).

METHOD

Survey sample

The study surveyed call centre workers in metropolitan Adelaide. Contact details for call centres in Adelaide were obtained from: the Australian Services Union; through contacts given by participating call centres; and through the researcher's personal contacts. A total of 16 call centres were contacted and permission to recruit volunteers was obtained from 9 of these centres. The reasons given by the call centres for not wishing to participate were that employees had recently been surveyed by the company ($f = 2$), the call centre was in the process of moving to new premises ($f = 1$), the manager who had authority to approve participation was on holidays for a number of weeks ($f = 1$), and the type of work that the call centre handled was unusual and not suited to the study ($f = 1$). Of the 195 questionnaires given to managers to be handed out to volunteers, 99 were returned (1 of which was unusable), representing a response rate of 50.7%. The participating call centres were drawn from a variety of industry sectors as shown in Table 1.

The survey respondents were predominantly female ($M = 27$, $F = 71$) and ranged in age from 18 to 63 years ($M = 32$ years, $SD = 10.6$ years). Fifty-three per cent were employed on a permanent basis and 47% were employed on a temporary or casual basis. Length of service was relatively short with 65% of respondents having worked less than 1 year in their current position. In terms of call type, 37% of respondents handled inbound calls only, 24% handled outbound calls only, and 37% handled both inbound and outbound calls.

Demographics

Demographic data was collected with regard to age, sex, education level, work status, and length of service. Participants were also asked to estimate

TABLE 1
Industry participation and response rates

<i>Industry</i>	<i>Number of participants</i>	<i>Average response rate</i>
Financial services (3)	45	57%
Telemarketing (1)	16	40%
Public services (2)	21	80%
Utilities (1)	7	46%
Mobile phone services (1)	6	60%
Airline reservations (1)	4	16%

Note: Numbers in brackets indicate number of participating organizations.

the number of calls and the length of calls taken each day and whether their work predominantly involved making outbound calls, receiving inbound calls, or a mixture of both.

Measures

Emotional demands. The emotional demands of call centre work were measured using five subscales of the recently developed Frankfurt Emotion Work Scales–E (FEWS; Zapf et al., 2001). The FEWS are the only theoretically based, empirical measures of emotion work developed to date. The FEWS subscale, Display of Positive Emotions (EP), comprises five items measuring the requirement to display positive emotions (e.g., “How often in your job do you have to display pleasant emotions towards customers?”). The subscale, Display of Negative Emotions (EV) is made up of seven items designed to assess the requirement to display negative emotions when dealing with customers (e.g., “How often do you have to display unpleasant emotions towards customers?”). The Demand for Sensitivity subscale (ES) comprises four items measuring the extent to which empathy or knowledge of the customers’ current feelings are a requirement of the job (e.g., “How often in your job is it of importance to know how the customer is feeling at the moment?”). The Interaction Control subscale (EH) comprises four items designed to measure the degree of influence an employee has in his or her interactions with customers (e.g., “How often does your job allow you to end conversations with customers if you consider it to be appropriate?”). Finally, the five items of the Emotional Dissonance subscale (ED) assess the level of suppression of organizationally undesirable emotions and the display of unmet emotions (e.g., “How often in your job do you have to suppress emotions in order to appear ‘neutral’ on

the outside?"). Responses for each of the scales were rated from 1 = very rarely/never to 5 = very often (several times an hour). Internal reliabilities for the scales as measured by Cronbach's alpha were .34 for positive emotions, .79 for negative emotions, .26 sensitivity demands, .24 for interaction control, and .72 for emotional dissonance. We will address the low reliabilities in the results section.

Psychosocial demands. The Effort–Reward Imbalance Questionnaire (ERI) was used to measure psychosocial demands (extrinsic effort). The measure of psychosocial demands from the ERI Questionnaire is conceptually and operationally similar to the measure of psychosocial demands in the Job Content Questionnaire (used to test the JDC model). Six items were used to measure work place demands (effort) including statements such as “I have constant time pressure due to a heavy work load”. Respondents were asked whether they agreed or disagreed with the statements on a 2-point scale. The alpha coefficient was .67.

Rewards. The ERI questionnaire was also used to measure rewards (monetary, esteem, status). Eleven items of the ERI scale are designed to measure the perceived rewards of the job and include statements such as “considering all my efforts and achievements, I receive the respect and prestige I deserve at work”. The reward scale items were rated agree or disagree on a 2-point scale. The reward scale was reverse scored so that a high score reflected high reward and low score reflected low reward. The alpha coefficient was .82.

Autonomy. The Job Control Scale of the Job Content Questionnaire (Karasek, 1998) was used to measure job autonomy. The scale includes nine items designed to measure skill discretion and decision authority. The scale is rated from 1 = strongly disagree to 4 = strongly agree and includes items such as “my job allows me to make a lot of decisions on my own” and “my job requires me to be creative”. Cronbach's alpha for the scale was .82.

Social support. The Social Support Scale of the Job Content Questionnaire (Karasek, 1998) was used to measure social support. The scale includes four items designed to measure co-worker support and four items designed to measure supervisor support. The scale is rated from 1 = strongly disagree to 4 = strongly agree and includes items such as “the people I work with take a personal interest in me” and “my supervisor is helpful in getting the job done”. Cronbach's alpha for the scale was .88.

Emotional exhaustion. The emotional exhaustion scale of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986) was used to measure

feelings of being emotionally extended and depleted of one's resources. The scale comprises eight items and includes statements such as "I feel emotionally drained from my work" and "I feel frustrated by my job". Items were rated from 0 = never to 6 = every day. Cronbach's alpha was .92.

Job satisfaction. A single item taken from the Job Satisfaction Scale (Warr, Cook, & Wall, 1979) was used to measure job satisfaction. The item, "taking everything into consideration how do you feel about your job as a whole?" was assessed on a 7-point scale from 1 = extremely dissatisfied to 7 = extremely satisfied.

Qualitative data. Qualitative data was obtained from two open-ended questions asking for "aspects of work contributing most to job satisfaction" and "most stressful aspects of call centre work". The data was sought to confirm (or not) the centrality of emotional labour components of call centre work.

Statistical treatment

Overall scores for emotional exhaustion, demands, reward, control, support, and the emotion work subscales (emotional dissonance, display of negative emotions, display of positive emotions, interaction control, and sensitivity) were obtained by summing the individual items for each scale.

Descriptive and frequency information was derived to assess the representativeness of the sample. Bivariate correlation analyses were then undertaken to delineate the relationship between the type of emotional labour performed, and its relationship to emotional exhaustion and job satisfaction, and to determine the relationship between emotional labour and other work place characteristics.

Given the possibility that different statistical procedures used to test core theoretical aspects of the models could themselves lead to different findings (Cotton, Dollard, & de Jonge, 2003) we uniformly used standard hierarchical multiple regression analyses to examine the main and interaction effects proposed in each hypotheses as recommended by Cohen and Cohen (1983). Prior to the analysis we standardized the independent measures to deal with problems of multicollinearity that arise from cross-product terms (Aiken & West, 1991). As moderated regression leads to a lack of power to detect interactions of significance the criterion for the significance of the increase in R^2 was .1 (Frese, 1999).

To test Hypothesis 1, a standard regression model was used to regress emotional exhaustion and job satisfaction on each of the emotional demands measures.

To test Hypothesis 2, the main effects of demand and emotional dissonance were assessed at Step 1, followed by the interactive effects of demands and emotional dissonance at the second step.

To test Hypothesis 3, that the JDR model would account for more variance than either the JDC or ERI model in both emotional exhaustion and job satisfaction, we adopted the following procedure. Given that, of the emotional demands, emotional dissonance was the only one associated with the outcome measures, an important question became: What resources could best reduce the negative impacts of emotional dissonance at work? Also, given that psychosocial demands have been shown in numerous studies to be reduced by control and rewards, to give every possibility of finding an effect if it existed (i.e., to increase the power), we focused only on emotional dissonance in the models.

With respect to the JDC model, emotional dissonance and control were entered at the first step, to test for the main effects of each variable, then the interaction (Emotional dissonance \times Control) was entered at the second step. Reward was added at the third step to see whether the addition of reward to the JDC model would improve its predictive power. The two interactions (Emotional dissonance \times Reward and Emotional dissonance \times Reward \times Control) were entered at the fourth step.

To test the ERI model, emotional dissonance and reward were entered at the first step, followed by their interactions (Emotional dissonance \times Reward) at the second step. Control was then entered at the third step to ascertain whether the addition of control to the ERI model would improve its predictive power. The two interaction terms (Emotional dissonance \times Control and Emotional dissonance \times Control \times Reward) were entered at the fourth step.

Finally, to test the combined JDR model, emotional dissonance, rewards, and control were entered at the first step of the analysis. Support was entered at the second step to ascertain whether this additional resource would add any variance. Then six interaction terms were entered (Emotional dissonance \times Control, Emotional dissonance \times Reward, Emotional dissonance \times Support, Emotional dissonance \times Control \times Reward, Emotional dissonance \times Control \times Support, and Emotional dissonance \times Control \times Support \times Reward).

RESULTS

Descriptives

Table 2 presents the descriptive statistics for all variables used in the regression analysis.

As can be seen the alpha coefficients of positive emotions, interaction control, and sensitivity requirements are low. We examined the interitem

TABLE 2
Means, standard deviations, ranges, and sample sizes for the study variables

<i>Variable</i>	<i>N</i>	<i>No of items</i>	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>Alpha</i>
Demands/effort	98	6	2.15	1.62	0–6	.67
Rewards	97	11	7.22	2.93	0–11	.82
Dissonance	98	5	17.09	3.64	6–23	.72
Positive emotions	98	5	21.43	1.91	16–25	.34
Negative emotions	98	7	10.03	3.70	6–21	.79
Interaction control	98	4	12.29	2.88	6–20	.24
Sensitivity	98	4	14.82	2.21	4–19	.26
Control	98	9	21.69	4.41	9–31	.82
Support	98	8	25.18	3.68	13–32	.88
Exhaustion	98	8	18.54	12.22	0–48	.92
Job satisfaction	98	1	5.02	1.26	1–7	

correlations and removed items that were contributing to a low alpha level. By the removal of one item from the positive emotion scale the alpha improved to .54, the removal of one item from the interaction control scale improved the alpha to .47, and removal of one item from the sensitivity scale improved the alpha to .76. We decided not to try to make further improvements to the scales as, despite two being of low reliability, interaction control was now only three items. Further the reliabilities were similar to those reported by Zapf et al. (1999) for positive emotions (.52) and for interaction control (.51).

Emotional exhaustion. Descriptive statistics revealed that call centre workers in this sample experienced moderate levels of emotional exhaustion. A comparison with other high strain professions suggests call centre workers in this sample experienced levels of exhaustion similar to that of police officers ($N = 430$, $M = 17.55$, $SD = 10.90$) and probation/correction officers ($N = 386$, $M = 19.49$, $SD = 11.33$) (Schaufeli & Enzmann, 1998), but less than human service workers (e.g., social workers) from a large public sector in South Australia ($N = 770$, $M = 20.06$, $SD = 11.11$; Dollard, Winefield, & Winefield, 2001). Twenty-four per cent of respondents reported high levels of emotional exhaustion, twenty-nine per cent reported moderate levels of emotional exhaustion, and forty-seven per cent reported low levels of emotional exhaustion.

Job satisfaction. Seventy-five per cent of call centre workers reported being satisfied with their jobs. The results were as follows: extremely satisfied 7%, very satisfied 29%, moderately satisfied 39%, not sure 8%, moderately dissatisfied 12%, very dissatisfied 3%, and extremely dissatisfied 1%. The levels of job satisfaction ($M = 5.02$) were slightly higher than other South

TABLE 3
Frequency of emotional labour requirements

<i>Frequency</i>	<i>Positive emotions (%)</i>	<i>Negative emotions (%)</i>	<i>Sensitivity (%)</i>	<i>Dissonance (%)</i>	<i>Interaction control (%)</i>
Very rarely/never	—	16.3	1.0	—	—
Once a week	—	57.2	10.2	6.1	11.2
Once a day	26.5	24.5	85.7	25.5	38.8
Several times a day	68.5	2.0	3.1	47.0	42.9
Several times an hour	5.0	—	—	21.4	7.1

Australian public sector human service workers ($N = 771$, $M = 4.84$, $SD = 1.37$) (Dollard et al., 2001).

Emotional labour. As shown in Table 3, call centre workers reported that their jobs entailed high positive emotional display and emotional dissonance requirements and low negative emotion display and sensitivity requirements. Around 21% of workers report the experience of emotional dissonance several times an hour. Respondents also reported that they were often in control of the duration of their interactions with customers. The length of interaction on the phone was short with 78% of calls lasting less than 5 minutes, 16% of calls lasting 5–10 minutes, and 5% over 10 minutes.

Examination of bivariate correlations (refer to Table 4) between the emotional labour variables and the outcome variables revealed a significant relationship between emotional dissonance and emotional exhaustion, $r(98) = .43$, $p < .01$, dissonance and job satisfaction, $r(98) = -.27$, $p < .01$, and positive emotions and emotional exhaustion, $r(98) = .21$, $p < .05$. Positive correlations between all other emotional labour variables and outcome variables were nonsignificant. Positive emotions were significantly positively correlated with sensitivity requirements and emotional dissonance. Negative emotions were significantly positively associated with interaction control. Further, sensitivity requirements were significantly positively correlated with emotional dissonance and support. There was no correlation between psychosocial demands and emotional dissonance indicating conceptual distinction between the variables.

Regression analysis

Emotional exhaustion and job satisfaction were regressed onto all of the emotional demand scales in two separate regression analyses. In each case *only* emotional dissonance was associated with the outcome measures: with

TABLE 4
Pearson intercorrelations of variables

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
1. Sex												
2. Length of service	0.23*											
3. Positive emotions	0.18	-0.17										
4. Negative emotions	-0.06	-0.06	-0.09									
5. Interaction control	0.10	-0.07	0.08	0.24*								
6. Sensitivity	0.02	-0.15	0.37**	-0.05	-0.03							
7. Dissonance	0.27**	0.02	0.32**	0.15	0.12	0.26*						
8. Demands	0.13	0.39**	0.18	0.06	-0.18	0.07	0.06					
9. Rewards	-0.16	-0.18*	-0.15	-0.01	0.10	-0.03	-0.10	-0.50**				
10. Control	-0.06	-0.01	0.15	0.20	0.03	0.07	-0.25*	-0.08	0.32**			
11. Support	-0.14	-0.12	-0.06	0.07	0.11	0.22*	-0.15	-0.35**	0.48**	0.32**		
12. Exhaustion	0.18*	0.21*	0.21*	-0.07	-0.02	0.07	0.43**	0.32**	0.54**	-0.39**	-0.49**	
13. Job satisfaction	-0.08	-0.17	-0.04	0.05	-0.06	-0.03	-0.27**	-0.24**	0.43**	0.56**	0.47**	-0.61**

* $p < .05$; ** $p < .01$. Sex, 1 = male, 2 = female. All other scores, high scores indicate high scores on the variable.

emotional exhaustion ($\beta = .44, p < .001$) and with job satisfaction ($\beta = .30, p < .05$). This is unequivocal support for Hypothesis 1. To further test the possibility that emotional dissonance mediated the effect of positive emotion display on emotional exhaustion we entered positive emotions at the first step ($\beta = .21, p < .05$). We then entered emotional dissonance at the second step ($\beta = .40, p < .001$) at which point positive emotions became nonsignificant indicating a mediation effect (Baron & Kenny, 1986).

Hierarchical regression analyses

A hierarchical regression model regressing emotional exhaustion on the main effects of emotional dissonance and demands, and their interactions, showed significant and equal effects for both demands (emotional dissonance, $\beta = .39, p < .001$; demands, $\beta = .40, p < .001$) and a significant interaction effect ($\beta = .14, p < .10$). (See Figure 1.)

A similar regression model showed main effects for emotional dissonance ($\beta = .25, p < .01$) and for psychosocial demands ($\beta = .23, p < .05$) on job satisfaction. There were no interaction effects. Hypothesis 2—that emotional dissonance would account for unique variance in the outcome measures beyond that of psychosocial demands—was supported.

Emotional exhaustion. Consistent with the JDC model, hierarchical regression analysis revealed significant main effects for dissonance and

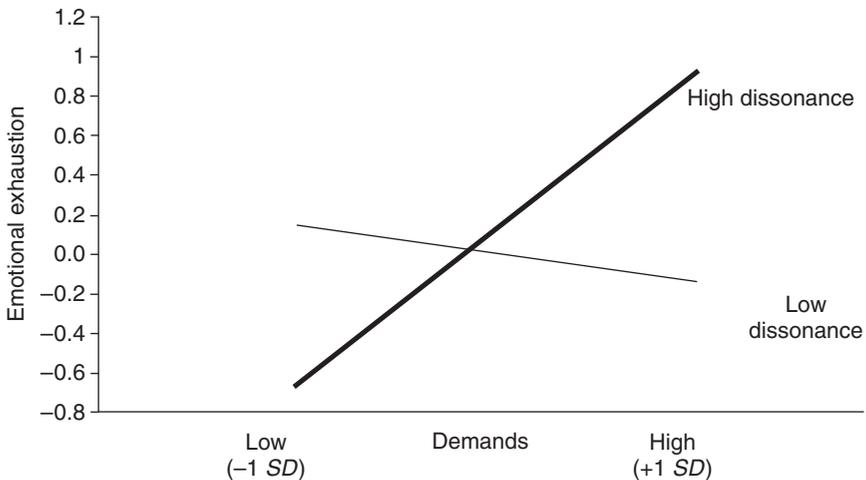


Figure 1. The interaction effect of emotional dissonance and demands on emotional exhaustion.

TABLE 5
 Hierarchical regression analysis predicting emotional exhaustion from emotional dissonance, control, and rewards

	<i>Additive model (Step 1)</i>	<i>Interactive model (Step 2)</i>	<i>Additive model (rewards) (Step 3)</i>	<i>Interactive model (Step 4)</i>
<i>JDC model</i>				
<i>Unstandardized regression coefficients (B)</i>				
ED	4.44***	4.45***	4.33***	4.26***
C	-3.70**	-3.66**	-1.99	-1.80
ED × C	—	-0.11	-0.08	0.52
R	—	—	-5.46***	-5.28***
ED × R	—	—	—	-1.20
ED × R × C	—	—	—	0.82
ΔR^2	0.29***	0.00	0.18***	0.01
Model R^2	0.29	0.29	0.47	0.48
	<i>Additive model (Step 1)</i>	<i>Interactive model (Step 2)</i>	<i>Additive model (control) (Step 3)</i>	<i>Interactive model (Step 4)</i>
<i>ERI model</i>				
<i>Unstandardized regression coefficients (B)</i>				
ED	4.77***	4.89***	4.47***	4.26***
R	-6.05***	-6.06***	-5.52***	-5.28***
ED × R	—	-1.42	-1.17	-1.20
C	—	—	-1.83	-1.80
ED × C	—	—	—	0.52
ED × R × C	—	—	—	0.82
ΔR^2	0.44***	0.01	0.02	0.00
Model R^2	0.44	0.46	0.48	0.48

** $p < .01$; *** $p < .001$. ED = emotional dissonance, C = control, R = rewards.

control with respect to emotional exhaustion (see Table 5 for beta values, and significance). However, the addition of rewards to the model appeared to mediate the impact of control on emotional exhaustion. In the presence of rewards, control was no longer significant in the prediction of emotional exhaustion. The model R^2 for the JDC model was .29. There were no significant interaction effects.

The main effects of dissonance and rewards using the ERI model were significant, and the interactive term did not add any further significant variance. The model R^2 for the ERI model was .44.

Finally the JDR model, adding key ingredients of the ERI/JDC model together, identified dissonance, rewards, and support as significant predictors and accounted for .47 for the variance and adding in social support a total of .50. No interaction terms were significant (see Table 7).

TABLE 6
Hierarchical regression analysis predicting job satisfaction from emotional dissonance, control, and rewards

	<i>Additive model (Step 1)</i>	<i>Interactive model (Step 2)</i>	<i>Additive model (rewards) (Step 3)</i>	<i>Interactive model (Step 4)</i>
<i>JDC model</i>				
<i>Unstandardized regression coefficients (B)</i>				
ED	-0.19	-0.19	-0.18	-0.18
C	0.67***	0.66***	0.55	0.53***
ED × C	—	0.00	0.00	-0.00
R	—	—	0.36**	0.35*
ED × R	—	—	—	0.12
ED × R × C	—	—	—	-0.01
ΔR^2	0.35***	0.00	0.08**	0.01
Model R^2	0.35	0.35	0.42	0.43
	<i>Additive model (Step 1)</i>	<i>Interactive model (Step 2)</i>	<i>Additive model (control) (Step 3)</i>	<i>Interactive model (Step 4)</i>
<i>ERI model</i>				
<i>Unstandardized regression coefficients (B)</i>				
ED	-0.30**	-0.32**	-0.20	-0.18
R	0.53***	0.53***	0.37**	0.35**
ED × R	—	0.20	0.13	0.12
C	—	—	0.54***	0.53***
ED × C	—	—	—	-0.00
ED × R × C	—	—	—	-0.01
ΔR^2	0.25***	0.02	0.15***	0.00
Model R^2	0.25	0.28	0.43	0.43

* $p < .05$; ** $p < .01$; *** $p < .001$. ED = emotional dissonance, C = control, R = rewards.

These results show that the JDR accounted for the most variance, supporting Hypothesis 3. Overall the rewards aspect in the models seemed to be the most important resource for reducing the impact of emotional dissonance on emotional exhaustion, but the best model includes all three resources.

Job satisfaction. Testing the main effects of emotional dissonance and control on job satisfaction, as per the JDC model, revealed a significant effect for control, as shown in Table 6. There were no significant interaction effects. The R^2 for the model was .35.

With respect to the ERI model, the main effects of emotional dissonance and rewards were significant, although there interactions were not. When control was added to the model it seemed to mediate the effect of emotional

TABLE 7
 Hierarchical regression analysis predicting emotional exhaustion from emotional dissonance, control, rewards, and support

	<i>Additive model (Step 1)</i>	<i>Additive model (support) (Step 2)</i>	<i>Interactive model (Step 3)</i>
<i>JDR model</i>			
	<i>Unstandardized regression coefficients (B)</i>		
ED	4.33***	4.14***	4.07***
R	-5.46***	-4.34***	-4.45***
C	-2.01*	-1.55	-1.27
Support	—	-2.68*	-2.46*
ED × R	—	—	1.34
ED × C	—	—	-0.38
ED × S	—	—	0.11
ED × C × R	—	—	0.01
ED × C × S	—	—	0.86
ED × C × S × R	—	—	0.24
ΔR^2	0.47***	0.04*	0.01
Model R^2	0.47	0.50	0.52

* $p < .05$; *** $p < .001$. ED = emotional dissonance, R = rewards, C = control, S = support.

dissonance rather than add to it. Emotional dissonance was no longer significant in the presence of control in predicting job satisfaction. R^2 for the model was .25.

Finally the JDR model showed main effects for rewards and control but not for emotional dissonance (as before mediated through control). The R^2 for the combined ERI/JDC was .42 and when social support was added, also as a significant main effect, the R^2 increased to .46. No interaction terms were significant (see Table 8).

These results again support Hypothesis 3, that the key ingredients of the combined JDC/ERI model would account for the most variance in job satisfaction than either model alone. Further when social support was added, completing the full JDC model, the variance was highest.

Qualitative data. The most frequently reported contributor to job satisfaction was providing good customer service, followed by good relationships with co-workers. The aspect of work considered to be most stressful was having to deal with angry and abusive customers, followed by pressure to meet targets and the repetitiveness of the job. These results confirm the centrality of emotion labour variables (dealing with angry/aggressive customers) in the experience of stress at work, as well as in the experience of satisfaction at work (making customers feel happy).

TABLE 8
 Hierarchical regression analysis predicting job satisfaction from emotional dissonance, control, rewards, and support

<i>JDR model</i>	<i>Additive model</i>	<i>Additive model</i>	<i>Interactive model</i>
	<i>(Step 1)</i>	<i>(support) (Step 2)</i>	<i>(Step 3)</i>
<i>Unstandardized regression coefficients (B)</i>			
ED	-0.18	-0.16	-0.19
R	0.36**	0.25*	0.27*
C	0.56***	0.51***	0.51***
Support	—	0.28*	0.24
ED × R	—	—	0.01
ED × C	—	—	0.01
ED × S	—	—	-0.01
ED × C × R	—	—	0.10
ED × C × S	—	—	-0.00
ED × C × S × R	—	—	0.01
ΔR^2	0.42***	0.04*	0.02
Model R^2	0.42	0.46	0.48

* $p < .05$; ** $p < .01$; *** $p < .001$. ED = emotional dissonance, R = rewards, C = control, S = support.

DISCUSSION

The focus of this research was on the increasingly important aspect of service work, emotional labour, within the context of the call centre industry. The research aimed to assess the importance of emotional dissonance in relation to other work demands both emotional and psychosocial. Next the research specifically drew on various theoretical frameworks to assess the best combination of emotional dissonance and key resources in the work environment (control, rewards, supports) to account for variance in stress outcomes, with an eye to intervention.

Role of emotional labour

Qualitatively the research confirmed the central role of emotional labour variables in the experience of stress and satisfaction at work. Quantitatively the research confirmed the importance of emotional dissonance compared to a range of emotional demand variables in its potency to account for variance in emotional exhaustion and job satisfaction.

This result confirms Morris and Feldman's (1997) finding that of the three components of emotional labour examined, namely frequency of interactions, duration of interactions, and emotional dissonance, only emotional dissonance was associated with emotional exhaustion and job

satisfaction. Specifically, we found that emotional dissonance fully mediated the relationship between positive emotional display and emotional exhaustion. The results of the present study are consistent with Brotheridge and Lee's (1998, cited in Zapf et al., 1999) view that the emotional demands of work do not directly lead to emotional exhaustion but do so through their relationship with emotional dissonance. Support for this proposal is also evident in the comments made by call centre workers themselves. Overwhelmingly, the most stressful aspect of call centre work was dealing with angry, abusive, and dissatisfied customers. This suggests that dissonance between felt emotions and emotional display rather than the requirement to express positive and negative emotions per se contributes to strain and job dissatisfaction among this group of call centre workers.

Surprisingly negative emotional display, sensitivity requirements, and interaction control were not associated with any of the outcome measures as found by Zapf et al. (2001) (correlations ranged from .20 to .10). A possible reason is our smaller sample size and lower power. Another possibility, in relation to negative emotional display, is that the characteristics of the call centre work in the study required infrequent negative emotional display (compared to positive emotional display). Workers may simply have ample opportunity to recover from negative emotional displays.

Further, emotional dissonance was found to be equal to the most frequently researched demand measure in the work stress literature (psychosocial demands) in its capacity to explain variance in both emotional exhaustion and job satisfaction. Emotional dissonance was found to exacerbate the level of emotional exhaustion at high levels of psychosocial demands, indicating jobs combining high levels of both kinds of demands are much more risky (see Figure 1). This is entirely consistent with Zapf et al. (2001), who also found numerous emotional dissonance*job stressor interactions: "If all stressors are high at the same time exaggerated levels of emotional exhaustion [will] occur" (p. 543).

A lack of correlation between psychosocial demands and emotional dissonance suggests that the two constructs act independently as workplace stressors and adds weight to the argument about the importance of including both kinds of demands especially in call centre or other human service style work. These findings add to the literature in a significant way and underscore the importance of exploring the emotional aspects of the work environment and looking at their possible interactions with other job characteristics (Abraham, 1998).

Levels of emotional exhaustion and job satisfaction

On average the level of emotional exhaustion among the call centre workers was moderate, levels of satisfaction were moderate to high compared with

other occupations. As discussed below the levels of stress maybe under-represented in this particular sample as we suspect a high level of turnover in the immediate population. Halik, Dollard, and de Jonge (2003), in a study of 102 South Australian CCWs, confirmed the link between emotional exhaustion and absenteeism ($r = .24$, $p < .05$) (but not between job satisfaction and absenteeism), confirming the importance of our findings in relation to broader industry issues.

Modelling the effects of emotional dissonance on call centre workers

The study found that the JDR accounted for the most variance in emotional exhaustion. Overall the rewards aspect in the models seemed to be the most important resource for reducing the impact of emotional dissonance, but the best model includes all three resources (rewards, control, support). In relation to job satisfaction again, support was found for the JDR model. The results further suggested the possible mediating role of control and the notion that emotional dissonance affects job satisfaction through control.

None of the demand*resources interaction terms were significant. Indeed the observation was recently made in modelling the unique contributions of job demands and job resources to burnout that there is little evidence of an interactive effect (see Demerouti et al., 2001).

Specifically the JDR was able to explain emotional exhaustion amongst this sample of call centre workers in terms of high levels of emotional dissonance, low rewards, and low levels of support. Further, support would appear to mediate the relationship between control and emotional exhaustion. These results however are in contrast to those of de Jonge et al. (1999), who found that while emotional demands had a direct effect on psychosomatic symptoms among their sample of health care workers, there was no direct significant effect on emotional exhaustion. Likewise van Vegchel et al. (2001) found that the relationship between high emotional demands and low rewards and emotional exhaustion was nonsignificant. In their study de Jonge et al. (1999) noted a significant positive correlation between emotional demands and psychosocial demands, which could account for the difference in results. Further, the Frankfurt Emotion Work Scale, used in the current study, may have provided an improved operationalization of emotion work and thus improved the construct validity of emotional demands.

In addition, high rewards, high control, and high support as conceptualized by the JDR appears to contribute to job satisfaction amongst this group of call centre workers. Emotional dissonance on the other hand appears to have an insignificant effect on job satisfaction, a finding consistent with that of de Jonge et al. (1999).

In summary, the potential ways to alleviate emotional exhaustion due to emotional dissonance is to reduce other psychosocial demands, and increase rewards, support, and control as conceptualized in the JDR model. The ways to boost job satisfaction is to boost control, support, and rewards.

Methodological considerations

The demographic characteristics in terms of gender, age, education level, and permanent/temporary/casual ratios of the call centre workers in this study were generally reflective of the national profile of Australian call centre workers as reported by the ACTU Call Centre Unions Group (2001) and the Information Industries Training Advisory Board (2001). This gives us confidence that the sample obtained (with some difficulty given the apparent oversurveillance of this group), is representative and the results generalizable to other call centre workers.

One difference however was that the average length of service was less than the national average of 2.5 years. Sixty-three per cent of call centre workers in the current study reported that they had worked in their current jobs for less than 12 months. Further, length of service was positively correlated with emotional exhaustion. This finding is consistent with the notion that stress increases with duration of exposure to stressors (Beehr, 1995; Dollard, 1996). The implication of this is that it is likely that we underestimate the level of distress, and the impact of emotional demands on stress in the call centre workers because their length of service is shorter (possibly due to the stressful nature of the work itself and a high turnover level).

The present study has a number of limitations that need to be considered. First, data from this study was derived entirely from self-report questionnaires. This could lead to problems such as common method effects. There is no reason to expect that this problem would lead to some associations and not others, rather a general inflation of associations. Second, the present study did not attempt to control for the personality trait negative affectivity. Negative affectivity has been shown to potentially confound the relationship between stressors and strain in self-report research (Moyle, 1995). Indeed recent research (Chrisopolous, Dollard, & Dormann, 2003) shows a stronger correlation between negative affectivity and emotional dissonance ($r = .33, p < .05$) than with any other work environment measure (max $r = .16$), as well as an association between negative affectivity and emotional exhaustion ($r = .48, p < .05$). Although this may suggest that the solution is to control for negative affectivity in future research, the notion that prevailing negative affect states are determined by the work environment itself leading to an underestimation of the effect of stressors is a counter-

indication (Dollard & Winefield, 1998). Clearly longitudinal research is needed untangle this problem of interpretation. Third, the sample size in the current study was relatively small, and this no doubt has led to a failure to find associations where small effects could be expected (e.g., between some of the emotional labour variables and outcomes). Fourth, although the response rate was low we have confidence that it is representative of the larger population of call centre workers. Fifth, it is widely acknowledged that cross-sectional studies are unable to determine causality. While various models guided the hypotheses made in this study, causal connections cannot be assumed. Longitudinal research in the area would make an important contribution in confirming the findings of this study. Finally the reliability coefficients of two of the FEWS subscales were very low. This could be due to two different response formats being required within each of the scales. Interestingly, Halik et al. (2003), in a study of 102 South Australian CCWs, omitted questions using the A–B format (i.e., Person A can openly display his/her true feelings—Person B has to display feelings towards clients which do not match his/her true feelings. What is your job like?) and reported much higher reliabilities (positive .73; negative .71; sensitivity .72; dissonance .82) but reported a similarly poor result for interaction control (.44). One of the scales with low reliability (positive emotions) correlated with emotional exhaustion at least where as the other scale (interaction control) did not. It is possible that the low reliability of scales affected results such that no or low associations were found with outcome measures.

IMPLICATIONS

Jobs that expose workers to high levels of emotional dissonance, such as having to deal with angry or aggressive customers and displaying positive emotions inconsistent with those genuinely experienced, may potentially be assisted through the provision of a range of key resources.

Emotional dissonance affects all human service workers, even though they may vary in the extent to which their work involves lasting relationships with clients/customers, and in the amount of training they have received to deal with client/customer-related social stressors. For example health professionals typically develop long-lasting relationships with their clients, whereas call centre workers may have only a single brief interaction. In accordance with contemporary theories of work stress (conservation of resources, effort–reward imbalance, demand–control–support), Dollard, Dormann, Boyd, Winefield, and Winefield (2003) argue that social support and training designed to develop “role separation” are crucial resources needed to help service workers cope with the unique emotion stressors of their jobs.

CONCLUSIONS

Emotional labour is emerging as a key issue in modern work settings. This article underscores the importance of looking at emotional labour, in particular emotional dissonance in modelling and theorizing about workplace stress in call centre workers. Emotional dissonance is pre-eminent in comparison to other quantitative aspects of emotional demands (emotional labour), and is equally important as the often-explored psychosocial job demands, in accounting for affects on emotional exhaustion and job satisfaction. Further, emotional dissonance combines with psychosocial demands in an interactive way, such that workers exposed to high levels of both kinds of demands are at much greater risk for the development of emotional exhaustion. Theories of work stress can thus be improved by taking account of occupation specific demands and the broader social and economic environment within which contemporary workers operate. Further, a deeper understanding of emotional labour and its role in service work may be achieved by placing it within the framework of organizational psychological models of work stress.

As the demand for call centre staff grows, it will be the organizations that provide healthy work environments that attract and retain the most valuable workers. The results of this article show that both employees and organizations alike can benefit from the creation of service jobs that enrich the working lives of call centre workers.

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